

# Electro-Voice®



## CDR-1000

### OPERATING INSTRUCTIONS SUPPLEMENT



**TELEX®**

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## Section 1 Quick Setup

See Section 1 of main RE-1 Operating Instructions

## Section 2 System Description

The CDR-1000 Wireless Microphone system combines frequency agility and ease of use like no other. The RE-1 transmitters and receivers operate over a 24MHz bandwidth in the UHF portion of the spectrum. The high quality audio circuitry and advanced Radio Frequency (RF) signal processing offer broadcast quality signal-to-noise and audio clarity.

### CDR-1000 Features Include:

- Advanced ClearScan technology for selecting clear channels and inter-modulation free groups.
- USB Port for monitoring and controlling the receiver from a PC.
- Integrated antenna splitter and output jacks
- Adjustable Balanced Line Level and fixed Mic Level XLR output jack.
- Headphone jack on front panel for monitoring and setup.
- Internal power supply with universal input.
- 960 Radio Channels, user programmable or factory installed.
- LCD Displays for ease of viewing.
- Patented DSP Phase Diversity System.
- Front Panel Power ON/OFF Switch.
- Quadruple Tuned Ceramic Resonator front end for superior interference rejection.
- SAW Filter 1st I.F for out of band rejection.
- Triple ceramic filters in 2nd I.F for adjacent channel rejection..
- Double Tuned Quadrature circuit for low audio distortion.
- Permanent Flash Memory for frequency/system storage.
- Front Panel Software Control of Squelch settings
- Double Squelch (Amplitude and Tone) system prevents false squelch.
- Lockout feature to prevent accidental channel changes
- Sound Check mode to speed walk testing and provide tangible results.

## Section 3 Detailed Component Descriptions

### CDR-1000 RECEIVER CONTROLS, CONNECTORS AND INDICATORS

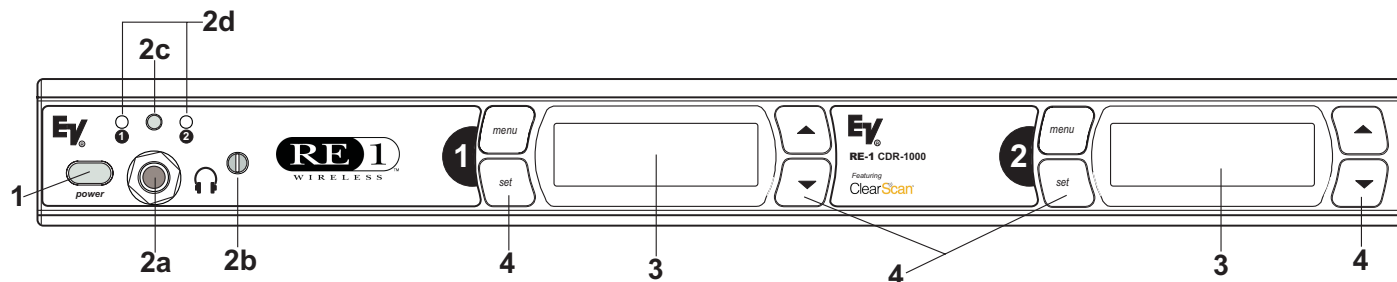


**Figure 1**  
**Front Panel CDR-1000 Receiver**

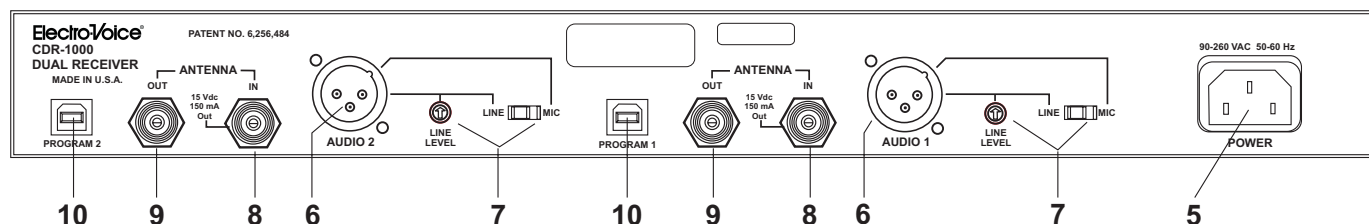


**Figure 2**  
**Rear Panel CDR-1000 Receiver**

1. Power ON/OFF
2. Headphone Monitoring
  - a. ¼ Inch Stereo Jack
  - b. Headset Volume Control
  - c. Receiver Select Button
  - d. Selected Receiver Indicator LEDs
3. Graphical Display (2)
  - a. Channel Display
  - b. Battery Strength Indicator
  - c. Diversity Indicator
  - d. RF Strength of Signal Indicator
  - e. Audio Level Indicator
4. Display Control Buttons (Menu/Set/Up/Down) (2 Sets)
5. Power Connector
6. Balanced Mic/Line Level XLR Audio Output (2)
7. Mic/Line Switch and Line Level Adjustment (2)
8. TNC Antenna Input Connectors (2) with 15Vdc (150mA) output on center pin
9. TNC Antenna Output Connectors (2) with factory installed “Dummy” loads (2)
10. USB Program Connector (2)

## Section 4 Detailed Description of Unique CDR-1000 Features

### Headset Operation

1. With the transmitters and receivers setup and operating (see Sections 1 and 3 in the main RE-1 Operating Instructions), plug stereo headphones into the 1/4inch jack on the front panel.
2. The Selected Receiver LED will indicate receiver 1 is being monitored. Press the Receiver Select button once to change from Receiver 1 to 2.
3. Press the Receiver Select button once more and both indicator LEDs will light. You can now listen to both receivers.
4. Pressing the Select button once more cycles back to Receiver 1.

### Audio Output

1. The CDR-1000 is equipped with a balanced XLR output for each receiver that can be switched between a fixed microphone level (-10dBV) and an adjustable line level (8mV – 0.775V RMS).
2. For microphone level operation place the Mic/Line switch in the Mic position. The level adjustment will have no effect on the output in the Mic setting.
3. For adjustable balanced line level operation place the Mic/Line switch in the Line position. The level adjustment will now affect the output.

### Antenna Connections

1. The Antenna input connection includes a 15Vdc source to power the UAA-500 UHF antenna amplifier for long coax runs and covering large performance areas.

**NOTE:** The two flexible ½ wave antennas included with the CDR-1000 can be remote mounted. For an additional 5dB gain use the LPA500B log periodic antenna.

2. The CDR-1000 is equipped with a left and right antenna output jack. These jacks can be used to connect up to 3 CDR-1000 (6 receivers) to two antennas without any additional equipment. **DO NOT** remove “dummy” loads unless connecting to another CDR-1000.

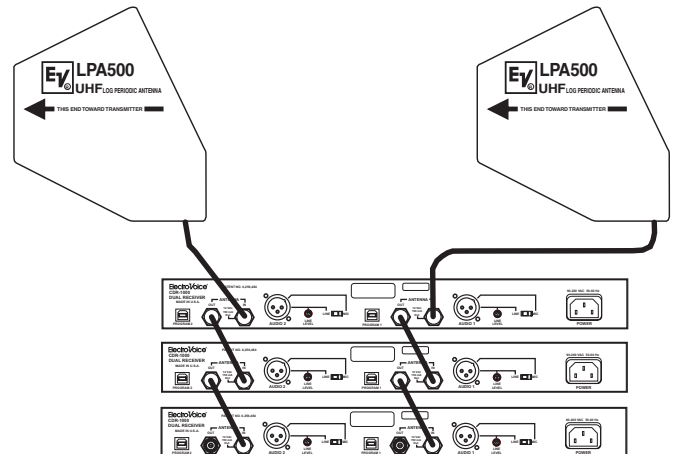


**Figure 3**  
**Antenna Chaining**

3. Figure 3 shows the connection diagram for 3 CDR-1000 units.
4. Up to 12 CDR-1000 units can be operated with just two antennas with the optional APD4 antenna distribution unit (see Figure 4).

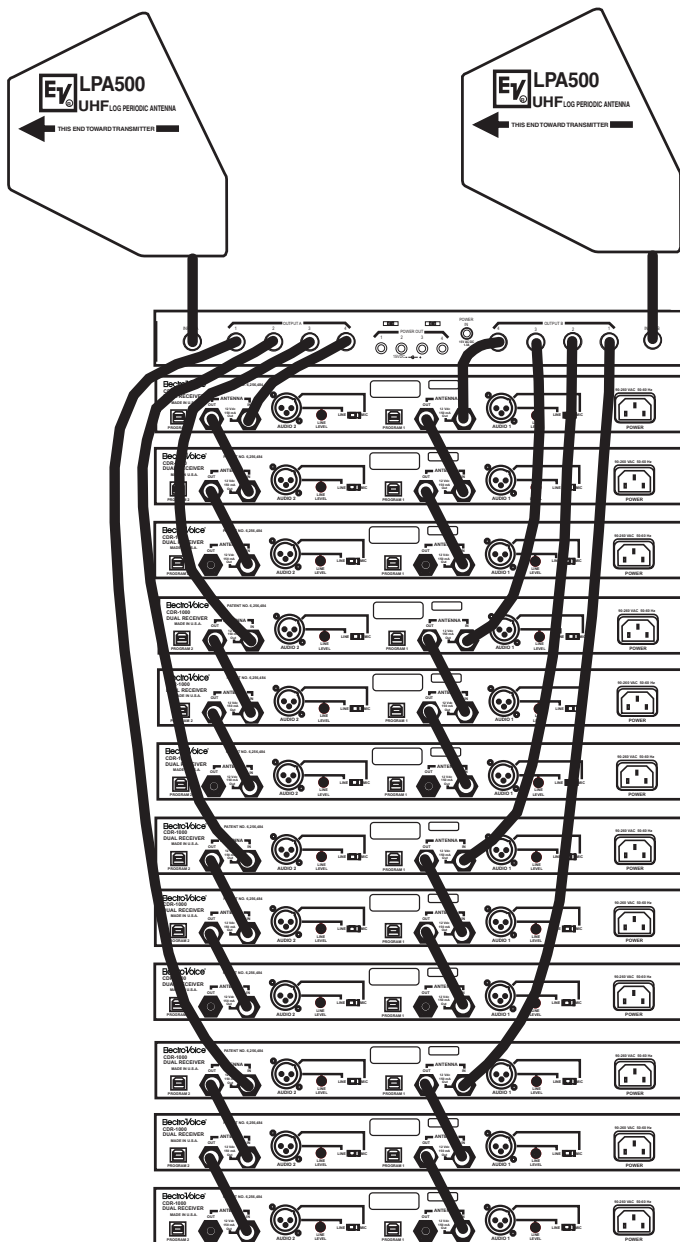


**Figure 4**  
**Antenna Chain with APD4**

## RE-OneLink PC Software

1. Software to monitor and control the CDR-1000 receivers from a PC through the USB port is available at [www.electrovoice.com](http://www.electrovoice.com). Minimum system requirements are:

Windows 2000  
 512 Mbytes of RAM  
 One USB port  
 USB Hubs for controlling multiple receivers  
 CD-ROM Drive  
 2 Mbytes of hard drive memory

## Section 5 Trouble Shooting Guide

| Problem                                                                         | Possible Causes                                                                 | Solutions                                                       |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------|
| No (or low) Audio with good RF signal and Audio indications on receiver display | Receiver audio output cable is disconnected or connected to the wrong receiver. | Repair, replace cable or connect cable to the correct receiver. |
|                                                                                 | Audio Output in Mic position or line level adjustment low                       | Adjust audio output (See Audio Output section)                  |
| Low RF Signal                                                                   | antennas connected to output instead of input jack.                             | Connect antennas to the input jack.                             |

For more trouble shooting information see Section 6 in the main Operating Manual.

## Section 6 CDR-1000 Receiver Specifications

|                                      |                                                                                                                                              |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Receiver Type                        | Synthesized PLL                                                                                                                              |
| Frequency Range (RF)                 | A Band 680 - 704 MHz<br>B Band 722 - 746 MHz<br>D Band 798 - 822 MHz<br>E Band 841 - 865 MHz<br>H Band 740 - 752 MHz<br>T Band 794 - 806 MHz |
| Number of Channels                   | > 900 possible channels<br>Programmable in 25 kHz steps                                                                                      |
| Modulation                           | +/- 40 kHz                                                                                                                                   |
| Diversity                            | DSP Posi-Phase™ True Diversity                                                                                                               |
| RF Sensitivity                       | < 0.8 mV for 12 dB SINAD                                                                                                                     |
| Image Rejection                      | > 60dB                                                                                                                                       |
| Squelch                              | Tone Code plus Amplitude                                                                                                                     |
| Ultimate Quieting                    | > 100dB                                                                                                                                      |
| FCC Certification                    | Approved under Part 15                                                                                                                       |
| Power Requirements                   | 15 VAC, 750mA max                                                                                                                            |
| Antenna Output DC Power (center pin) | 15VDC, 150mA                                                                                                                                 |
| Operating Temperature                | -7° to 49° C (20° to 120° F)                                                                                                                 |
| Dimensions:                          | 1.72 in. H x 16 in. W x 10.25 in. D<br>43.7mm H x 408 mm W x 261.4 mm D                                                                      |

### Audio Parameters

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Frequency Response              | 30 – 15kHz +/- 2dB                |
| Fixed Mic Level Balanced Output | -10 dBV (max @ 40 kHz deviation)  |
| Line Level Balanced Output      | adjustable 8 mV to 0.755V RMS     |
| Distortion                      | <0.5% (ref 1kHz, 40kHz deviation) |
| Signal-to-Noise Ratio           | >110dB                            |
| Dynamic Range                   | >100dB                            |

## Section 7 Certification

### CERTIFICATIONS

(Depending on frequency selected and country of operation)

**CDR-1000 Receiver, CSH-1000 Transmitter, CSB-1000 Transmitter**

Certified to ETSI EN 300 422-2 and ETSI EN 301 489-3, Conforms to European Union directives, eligible to bear CE marking as per the R&TTE Directive. Certified for use in Canada under RSS 123 Issue 1.

The CDR-1000 is authorized under United States Federal Communications Commission, Part 15.

The CSH-1000 and CSB-1000 are Type Accepted under United States Federal Communications Commission, Part 74.

Licensing of this equipment is the user's responsibility and is determined by the user's classification, the user's application, and frequency selected. The user should contact the appropriate telecommunications authority for any desired clarification. Any changes or modifications made to the aforementioned equipment, by the user, could void the user's authority to operate the equipment.

## Section 8 Accessories

### ACCESSORIES AND PARTS for CDR-1000

|                                                | MODEL # | ORDER # |
|------------------------------------------------|---------|---------|
| UHF Wideband Antenna Amplifier (520 – 806 MHz) | UAA-500 | 7186400 |
| ½ WAVE FLEXIBLE Rx ANTENNA (680-860 MHz)       | FA-1    | 860031  |



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